CRUISE CONTROL SYSTEM (CCS) THROUGH M.Y. 2001

GENERAL INFORMATION

All cruise control system functions are controlled by the applicable Engine Control Module (ECM). The processing of electronic engine controls and cruise control functions are integrated in the ECM. Other than the cruise control switches on the steering column, the clutch and brake pedal switches and related wiring, there are no separate cruise control components to be serviced.

As the electronic throttle control operations are monitored by On Board Diagnostic (OBD), Diagnostic Trouble Codes (DTC) pertaining to engine electronics that are stored in DTC memory may be relevant to cruise control function.

Always check DTC memory in ECM first before troubleshooting (Function 02).

CRUISE CONTROL SYSTEM (CCS) THROUGH M.Y. 2001, SERVICING

The operating status of the cruise control system, cruise control switches, brake and clutch switches can be checked using the following procedure.

Special tools and equipment

- VAG 1551/1552 Scan Tool (ST) with VAG 1551/3 adapter cable, or VAS 5051 Vehicle Diagnostic Testing and Information System
- Connector test kit VW 1594
- Test box VAG 1598A
- Multimeter Fluke 83
- Wiring diagram

Test requirements

- Battery (B+) voltage at least 11.5 V
- Ground connections on engine, transmission and battery OK
- Diagnostic Trouble Code (DTC) memory of Engine Control Module (ECM) checked and OK
- Fuse S5 OK
- Fuse S43 OK

Test sequence

NOTE:

- **On some 1998 model year vehicles with automatic transmission, the CCS**

switch is not supplied with voltage until the vehicle speed exceeds 30 km/h (approx. 19 mph) and the selector lever is in position D, 3 or 2. Once the switch has been supplied with voltage it will also remain live at idle, provided a driving range other than 1 or R is selected.

- **If the cruise control is inoperative on 1.9L TDI models, check if system is activated, See CRUISE CONTROL SYSTEM - TDI ENGINES, ACTIVATING .**

- Connect VAG 1551/1552 Scan Tool

  See **VAG 1551 SCAN TOOL (ST), CONNECTING, SELECTING FUNCTIONS & CHECKING CONTROL MODULE VERSIONS** .

- Switch on ignition
- Press buttons 0 and 1 to select "Engine electronics" address word 01.

Indicated on display (example only)

- Press --> button.

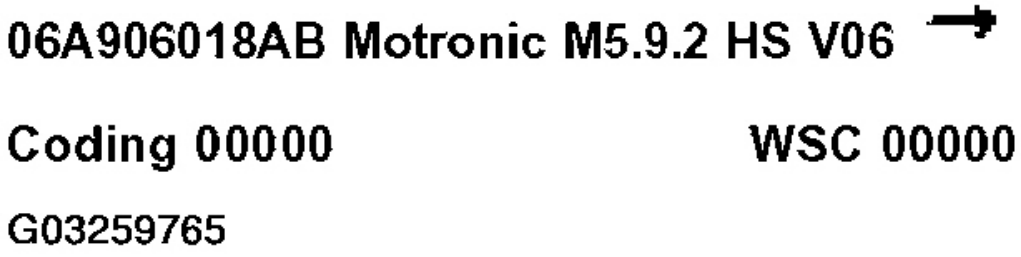

Fig. 1: VAG 1551/1552 Scan Tool Display - Cruise Control System (1 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

Indicated on display

- Press buttons 0 and 8 to select function 08 "Read measuring value block".
- Press Q button to enter input.

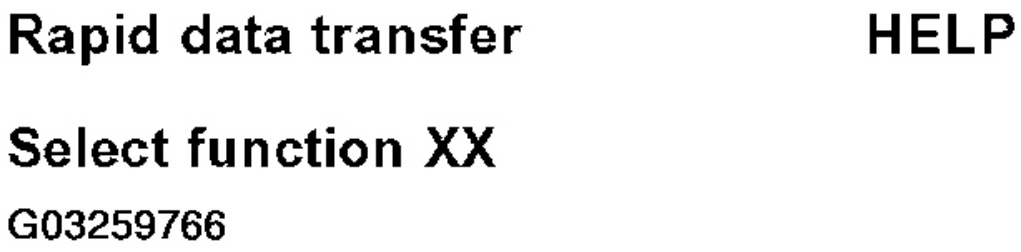

Fig. 2: VAG 1551/1552 Scan Tool Display - Cruise Control System (2 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

Indicated on display

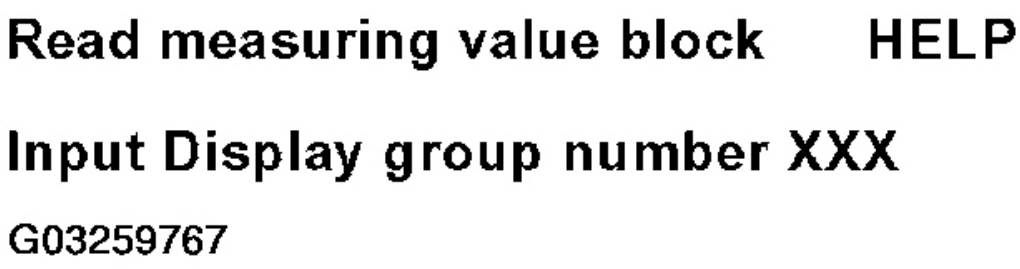

Fig. 3: VAG 1551/1552 Scan Tool Display - Cruise Control System (3 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

For all 1.8 Liter Turbo & 2.0 Liter engines:

- Press 0, 6 and 6 buttons to select "Display group 66".

For 1.9 Liter TDI engine:

- Press 0, 0 and 6 buttons to select "Display group 06".
- Press Q button to enter input.

Indicated on display

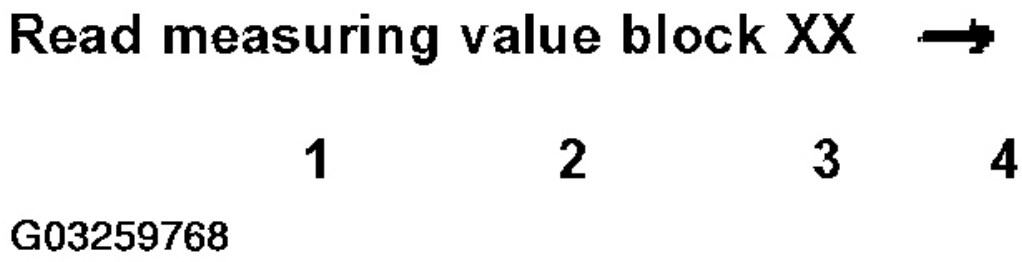

Fig. 4: Vag 1551/1552 Scan Tool Display - Cruise Control System (4 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- Refer to the following engine specific tables to interpret values in display fields 2 - 4:
  - 1.8 Liter Turbo (codes APH & AWV). See **1.8 LITER TURBO (CODES APH, AWV & AWP) & 2.0 LITER (CODES AVH & AZG)** .
  - 1.9 Liter TDI. See **1.9 LITER TDI** .
  - 2.0 Liter (code AEG). See **2.0 LITER (CODE AEG)** .
  - 2.0 Liter (codes AVH & AZG). See **1.8 LITER TURBO (CODES APH, AWV & AWP) & 2.0 LITER (CODES AVH & AZG)** .

NOTE:

- **The road speed signal input to the ECM for cruise control function can be confirmed by performing a road test and observing that the km/h value indicated in display field 1 changes.**
- **Always observe the appropriate safety precautions during road test.**

1.8 Liter Turbo (codes APH, AWV & AWP) & 2.0 Liter (codes AVH & AZG)

1.8 LITER TURBO (CODES APH, AWV & AWP) & 2.0 LITER (CODES AVH & AZG)
SPECIFICATION

Display Group	Display Field	Designation	Test Conditions	Display	Corrective Actions
66	2	Clutch vacuum vent valve -F36- and Brake switch -F47-	Clutch and brake not depressed	1000	• Check for open/short circuit in wiring and connections to -F36- and/or -F47- using wiring diagram • Checking -F36- and/or -F47-: See "ADDITIONAL SIGNALS, CHECKING ".
			Brake	1011	

			depressed		
			Clutch depressed	1100	
	4	Cruise control switch -E45-	-E45- in OFF position	0000	• Check for open/short circuit in wiring and connections to -E45-, -E227- and Engine Control Module (ECM) using wiring diagram
			-E45- in OFF position before switch point	0001	
			-E45- in ON position	0011	
			-E45- in RES position	1011	
		Button for cruise control SET -E227-	-E45- in ON position -E227- SET button depressed	0111	

2.0 Liter (code AEG)

2.0 LITER (CODE AEG) SPECIFICATION

Display Group	Display Field	Designation	Test Conditions	Display	Corrective Actions
66	2	Clutch vacuum vent valve -F36- and Brake switch -F47-	Clutch and brake not depressed	1000	• Check for open/short circuit in wiring and connections to -F36- and/or -F47- using wiring diagram (2) • Checking -F36- and/or -F47-: See "ADDITIONAL SIGNALS, CHECKING ".
			Brake depressed	1111	
			Clutch depressed	1110	
	4	Cruise control switch -E45-(1)	-E45- in OFF position	0011	• Check for open/short circuit in wiring and connections to -E45-, -E227- and Engine Control Module (ECM) using wiring diagram
			-E45- in OFF position before	0010	

			switch point		
			-E45- in ON position	0000	
			-E45- in RES position	1000	
		Button for cruise control SET -E227-	-E45- in ON position -E227- SET button depressed	0100	

(1) In order to check -E45- on 1998 models with automatic transmission, it may be necessary to first perform a test drive and exceed 30 km/h (approx. 19 mph). Perform test at idle A drive range other than 1 or R must then be selected at idle with parking brake engaged.

(2) The power supply circuit to -F36- and -F47- was changed beginning with m.y. 1999. Always use appropriate wiring diagram.

1.9 Liter TDI

1.9 LITER TDI SPECIFICATION

Display Group	Display Field	Designation	Test Conditions	Display	Corrective Actions
06	2	Clutch vacuum vent valve -F36- and Brake switch -F47-	Clutch and brake not depressed	000	• Check for open/short circuit in wiring and connections to -F36- and/or -F47- using wiring diagram
			Brake depressed	0 1 1	
			Clutch depressed	1 00	
		-	Clutch and brake depressed	1 1 1	
	3	Cruise control switch -E45-(1)	-E45- in OFF position	000000	• Check for open/short circuit in wiring and connections to -E45-, -E227- and Diesel Direct Fuel injection Control Module (ECM) using wiring diagram
		-	-E45- in OFF position before switch point	000001	
			-E45- in ON position	000011	
			-E45- in RES position	001011	

		Button for cruise control SET - E227-	-E45- in ON position E227- SET button depressed	000111	
	4	System status	System activated, -E45- in ON position	1	
			System activated, -E45- in OFF position	0	
			System not activated	255	• Activate cruise control, See **CRUISE CONTROL SYSTEM - TDI ENGINES, ACTIVATING**

(1) In order to check -E45- on 1998 models with automatic transmission, it may first be necessary to perform a test drive and exceed 30 km/h (approx. 19 mph). A drive range other than 1 or R must then be selected at idle with parking brake engaged.

CRUISE CONTROL SYSTEM - TDI ENGINES, ACTIVATING

If a Diesel Direct Injection Engine Control Module (ECM) has been replaced, it may be necessary to activate the cruise control function in the new ECM. Check system status and activate if necessary using the following procedure.

- Connect VAG 1551/1552 Scan Tool.

  See **VAG 1551 SCAN TOOL (ST), CONNECTING, SELECTING FUNCTIONS & CHECKING CONTROL MODULE VERSIONS** .

- Switch on ignition
- Press buttons 0 and 1 to select "Engine electronics" address word 01.

Indicated on display (example only)

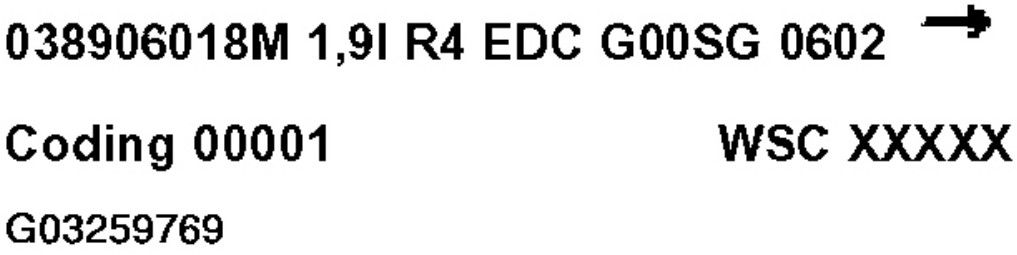

Fig. 5: Vag 1551/1552 Scan Tool Display - Cruise Control System - TDI Engines Activating (1 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- If display shows "G00SG", on top line, cruise control is activated.
- If display shows "00SG", on top line, cruise control is not activated.
    - Press --> button to begin activation sequence.

Indicated on display

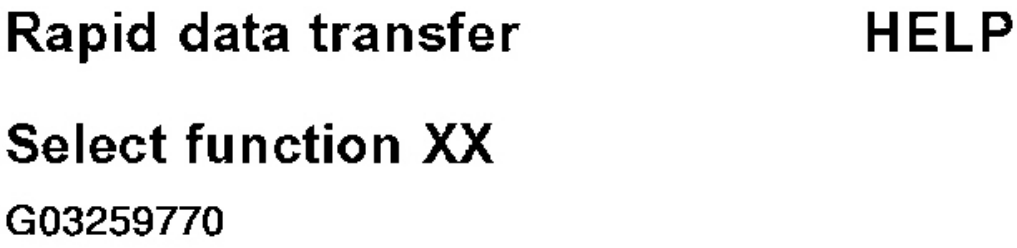

Fig. 6: Vag 1551/1552 Scan Tool Display - Cruise Control System - TDI Engines Activating (2 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- Press buttons 1 and 1 to select "Login-Procedure" function 11.

Indicated on display

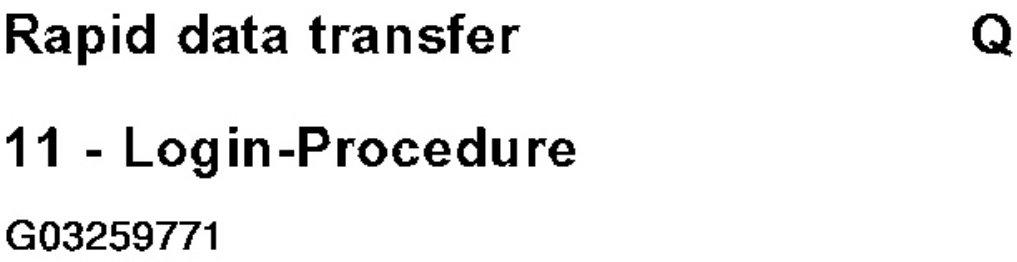

Fig. 7: Vag 1551/1552 Scan Tool Display - Cruise Control System - TDI Engines Activating (3 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- Press Q button to enter input.

Indicated on display

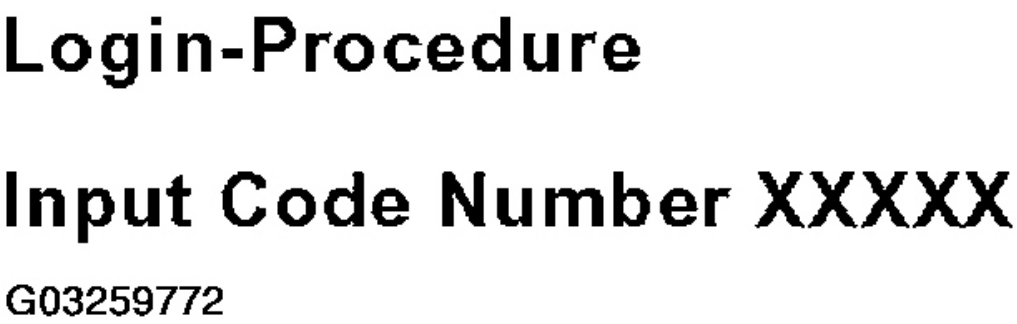

Fig. 8: Vag 1551/1552 Scan Tool Display - Cruise Control System - TDI Engines Activating (4 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- To activate cruise control, enter code number 11463 (to deactivate, enter 16167)
- Press Q button to enter input.
- End output (function 06) and perform test drive to confirm cruise control functions.

CRUISE CONTROL SYSTEM - GASOLINE ENGINES, ACTIVATING

If a Motronic Engine Control Module (ECM) or Diesel Direct Injection Control Module (DFI) has been

replaced, it may be necessary to activate the cruise control function in the new ECM. Activate/deactivate system using the following procedure.

- Connect VAG 1551/1552 Scan Tool.

  See **VAG 1551 SCAN TOOL (ST), CONNECTING, SELECTING FUNCTIONS & CHECKING CONTROL MODULE VERSIONS** .

- Switch on ignition
- Press buttons 0 and 1 to select "Engine electronics" address word 01.

Indicated on display (example only)

Fig. 9: Vag 1551/1552 Scan Tool Display - Cruise Control System - Gasoline Engines Activating (1 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- Press --> button.

Indicated on display

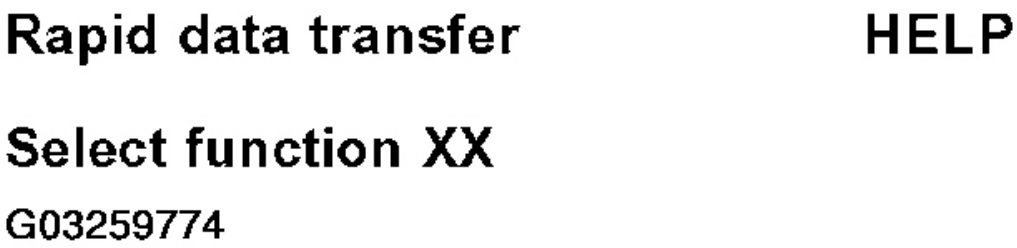

Fig. 10: Vag 1551/1552 Scan Tool Display - Cruise Control System - Gasoline Engines Activating (2 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- Press buttons 1 and 1 to select "Login procedure" function 11.

Indicated on display

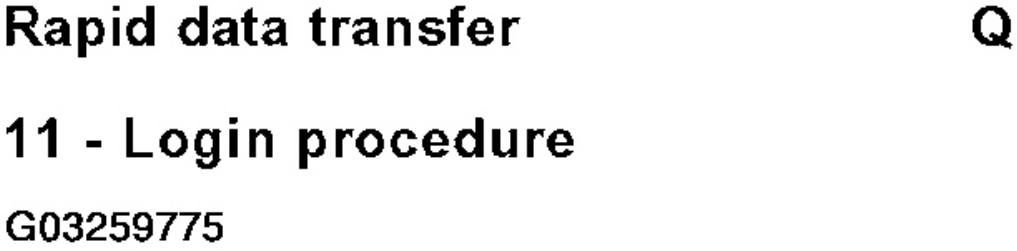

Fig. 11: Vag 1551/1552 Scan Tool Display - Cruise Control System - Gasoline Engines Activating (3 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- Press Q button to enter input.

Indicated on display

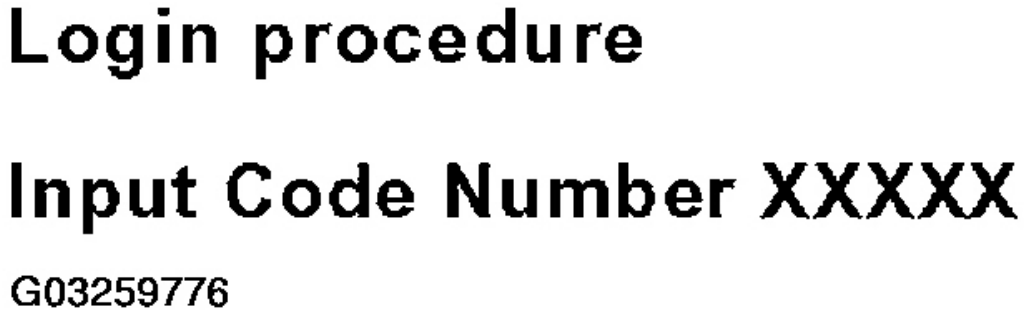

Fig. 12: Vag 1551/1552 Scan Tool Display - Cruise Control System - Gasoline Engines Activating (4 Of 4)
Courtesy of VOLKSWAGEN OF AMERICA, INC.

- To activate cruise control, enter code number 11463 (to deactivate, enter 16167)
- Press Q button to enter input.
- End output (function 06) and perform test drive to confirm cruise control functions.

CRUISE CONTROL SYSTEM (CCS) FROM M.Y. 2002

GENERAL INFORMATION

All cruise control system functions are controlled by the applicable Engine Control Module (ECM). The processing of electronic engine controls and cruise control functions are integrated in the ECM. Other than the cruise control switches on the steering column/multifunction steering wheel, the clutch and brake pedal switches and related wiring, there are no separate cruise control components to be serviced.

As all electronic throttle control operations are monitored by On Board Diagnostic (OBD), Diagnostic Trouble Codes (DTC) pertaining to engine electronics that are stored in DTC memory may be relevant to cruise control function.

Always check DTC memory first before troubleshooting.

All CCS troubleshooting and OBD program functions on vehicles from m.y. 2002 should be performed using the VAS 5051 Vehicle Diagnostic Testing and Information System in operating mode "Guided Fault Finding" or "Vehicle Self-Diagnosis".